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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/566,960 | 01/27/2006 | Tingfu Zhang | 7002/4 | 9226 |
| 27774 | 7590 | 10/10/2006 | | |
| MAYER & WILLIAMS PC 251 NORTH AVENUE WEST 2ND FLOOR WESTFIELD, NJ 07090 | | | EXAMINER LEYSON, JOSEPH S | |
| | | | ART UNIT 1722 | PAPER NUMBER |

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/566,960

Applicant(s)

ZHANG ET AL.

Examiner

Joseph Leyson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it exceeds 150 words.

Correction is required. See MPEP § 608.01(b).

3. The spacing of the lines of the specification is such as to make reading difficult.

New application papers with lines 1½ or double spaced on good quality paper are required.

4. The listing of references in the specification (p. 1) is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 103

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessemer et al. (U.S. Patent 6,620,354) in view of Racioppi et al. (U.S. Patent 5,780,071), Gatto (U.S. Patent 3,538,210) and Dorninger (U.S. Patent 5,505,058).

Bessemer et al. (U.S. Patent 6,620,354) disclose a cooling and molding water (i.e., col. 4, lines 37-44) tank for extrusion of a plastic complicated profile (i.e., col. 6, lines 32-34) including a tank body (i.e., fig. 9) including a front end block, a rear end block, a top cover, two side plates and a bottom plate, and a plurality of molding blocks 523, 526, 529, 532, 535 (five in number) and water collection plates (four in number, with internal cavities 543, 546, 549, 552) which are provided along the length direction inside the tank body, the openings of the molding blocks and the internal cavities are

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aligned (i.e., col. 11, lines 6-10; i.e., the shapes thereof are the same), the molding blocks and water collection plates being spaced from each other at an interval (i.e., fig. 9). However, Bessemer et al. (U.S. Patent 6,620,354) doesn't disclose foot plates, an inlet pipe, an outlet pipe, a vacuum valve, a vacuum gauge or the increasing interval spacing, as recited by the instant claims.

Racioppi et al. (U.S. Patent 5,780,071) discloses molding blocks 10, 12, 14, 16 bolted to a plurality of foot plates 18, 26, 28 which enable changeover of the molding blocks (i.e., col. 3, lines 4-39).

Gatto (U.S. Patent 3,538,210) discloses a cooling and molding water tank 40 which includes a water inlet 90 near a front end block 43 and a water outlet 82 near the rear end block 44, which enable concurrent water flow to the extruded profile 32, and which includes molding blocks 61-66 which are spaced in intervals that become wider from the front end to the rear end to increase the degree of setting of the extruded profile 32 (i.e., col. 6, lines 48-75).

Dorninger (U.S. Patent 5,505,058) discloses a cooling and molding water tank 2 having means for providing water and vacuum to the tank which includes an inlet pipe 12 provided on a side plate 4 of the water tank near a rear end block 5, an outlet pipe 13 provided near the front end block 1, and a vacuum valve 15, 16 and a vacuum gauge 17 provided on a top cover of the water tank. The inlet pipe 12 is provided near the rear end block and the outlet pipe 13 is provided near the front end block, so that water flow is counter-current to the extruded profile (i.e., col. 2, line 63, to col. 3, line 2).

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It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the tank of Bessemer et al. (U.S. Patent 6,620,354) with footing plates because such a modification would enable changeover as disclosed by Racioppi et al. (U.S. Patent 5,780,071), to modify the interval spacing of Bessemer et al. (U.S. Patent 6,620,354) to become wider from the front end to the rear end because such a modification would increase the degree of setting of the extruded profile within the tank as disclosed by Gatto (U.S. Patent 3,538,210), to modify the tank of Bessemer et al. (U.S. Patent 6,620,354) with the means for providing water and vacuum of Dorninger (U.S. Patent 5,505,058) because such a modification is well known and conventional in the art and would provide means for water and vacuum to the tank of Bessemer et al. (U.S. Patent 6,620,354), and to further modify the inlet pipe to be near the front end block and the outlet pipe to be near the rear end block because such a modification would enable concurrent flow relative to the extruded profile as disclosed by Gatto (U.S. Patent 3,538,210) which is an art recognized alternative to counter-current flow as disclosed by Dorninger (U.S. Patent 5,505,058). As to instant claims 2, 5 and 6, Dorninger (U.S. Patent 5,505,058) discloses molding blocks 8, 8a, 8b which are securely inserted into a receptacle of the tank 2 at the internal side of the side plates 4 of the water tank, which have a limited freedom of motion in the longitudinal, transverse and vertical directions (i.e., figs. 1-3). The molding blocks 8, 8a, 8b have water passage slots 9 which increase flow turbulence to increase profile cooling (i.e., col. 2, lines 36-47). Note that it would be further obvious to change the shape of the slot as long as turbulent flow is still achieved because changing the shape would have been a matter of

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choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed shape is significant, In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966); and that it would be further obvious to an artisan of ordinary skill to make plural slots in a molding block because it is entirely obvious to duplicate parts for a multiplied effect, St. Regis Paper Co. v. Bemis Co., Inc., 193 USPQ 8. Therefore, it would have been further obvious to modify the tank with the molding blocks of Dorninger (U.S. Patent 5,505,058) because such a modification would provide a means for securing the molding blocks such that the mold blocks have a limited freedom of motion in the longitudinal, transverse and vertical directions and because such a modification would increase flow turbulence to increase profile cooling, as disclosed by Dorninger (U.S. Patent 5,505,058). As to the dimensions of the tank recited by the instant claims, where the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device is not patentably distinct from the prior art device, In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984).

8. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessemer et al. (U.S. Patent 6,620,354) in view of Racioppi et al. (U.S. Patent 5,780,071), Gatto (U.S. Patent 3,538,210) and Dorninger (U.S. Patent 5,505,058) as applied to claims 1-6 and 9 above, and further in view of Kossel (U.S. Patent Application Publication US 2003/0219503).

KossI (U.S. Patent Application Publication US 2003/0219503) discloses an adjusting mechanism for changing the shape of a profile cavity passage which is provided on the long side of the profile cavity passage of a molding block 17, the adjusting mechanism including a through kurf 37 which is parallel to and a close distance from the plane of the long side of the profile cavity passage, and at least one through screw hole 53 which is provided on and perpendicular to the plane of the long side, and intersects with the lower side of the kurf 37, wherein an adjusting screw 53 is engaged with the screw hole 53 and the top of the adjusting screw 53 may extend against the upper side of said kurf 37 (i.e., paragraph [0073]).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the tank with the adjusting mechanism of KossI (U.S. Patent Application Publication US 2003/0219503) because such a modification would enable the shape of the profile cavity passage to be changed.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bessemer et al. (U.S. Patent 6,620,354) in view of Racioppi et al. (U.S. Patent 5,780,071), Gatto (U.S. Patent 3,538,210) and Dorninger (U.S. Patent 5,505,058) as applied to claims 1-6 and 9 above, and further in view of Grassi (U.S. Patent 6,394,782).

Grassi (U.S. Patent 6,394,782) discloses that it is typical for elements of a tank to be made from aluminum (i.e., col. 11, lines 13-17).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the tank to be made from aluminum because

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such a modification is well known and conventional in the art as disclosed by Grassi (U.S. Patent 6,394,782) and would provide the tank with a material known to be operable in the art for cooling and molding a profile.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wegmaier et al. (U.S. Patent 6,244,847), Purstinger (U.S. Patent 5,514,325) and Purstinger (U.S. Patent 6,066,288) are cited as of interest to show the state of the art.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Leyson whose telephone number is (571) 272-5061. The examiner can normally be reached on M-F 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gupta Yogendra can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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JL



ROBERT DAVIS
PRIMARY EXAMINER
GROUP 1300

9/30/06